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having different energies that is produced by the ligands in a metal ion–ligand complex.

crystal field theory A description of the way in which the *d* orbitals of a metal are deformed by the electrons of a ligand in a metal ion–ligand complex. According to this theory (so called since it was developed to explain the spectra of transition metal impurities in crystals) the ligands in a transition-metal complex are treated as point charges.

crystal lattice The three-dimensional arrangement of the atoms in a crystal.

crystallin The major structural protein of the lens of the eye. A water-soluble protein that occurs in a number of forms not all of which occur in all species. Mammalian crystallins are classified into three major groups, designated α, β, and γ. The first two are oligomeric proteins that occur as various aggregates and cover a large range of molecular weights; γ-crystallins are monomeric proteins having a molecular weight of less than 28,000.

crystalline Of, or pertaining to, crystals.

crystallizable fragment FC FRAGMENT.

crystallization The transition of a substance from the molten, the liquid, or the gaseous state to the crystalline state.

crystallographic model A molecular model, such as a ball and stick or a framework model, in which the bond lengths and the bond angles are clearly indicated.

crystalloid A noncolloidal low molecular weight substance.

crystal protein One of a group of globular proteins that form crystalline inclusions in bacterial cells; they are widespread among *Bacillus* species. The formation of crystal proteins coincides with spore morphogenesis and may be related to it.

crystal violet A basic dye used in cytochemistry.

Cs Cesium.

CS Chorionic somatomammotropin; *see* placental lactogen.

CSF 1. Cerebrospinal fluid. 2. Colony-stimulating factor.

CSM Corn–soya–milk; a protein-rich baby food (20% protein) made in the United States from 68% precooked corn, 25% defatted soya flour, and 5% skim milk powder, with added vitamins B_1, B_2, B_6, and B_{12}, nicotinic acid, pantothenic acid, folic acid, vitamins A, D, and E, and $CaCO_3$. The mixture is used as a protein supplement in regions where either a low-protein diet or malnutrition is prevalent.

c-src gene A gene that is present in normal cells of various vertebrates and that is closely related to src, the oncogene of Rous sarcoma virus. The c-src gene codes for a protein (designated $_{pp}60$ c-src) that has similar properties to those of the protein coded for by the src gene.

C strand Crick strand.

C substances A group of serologically distinct carbohydrates only one of which may occur in a given strain of *Streptococcus*; used as a basis for the identification and classification of streptococci.

CT Calcitonin.

CTAB *See* quat.

C-terminal The end of a peptide or a polypeptide chain that carries the amino acid that has a free alpha carboxyl group; in representing amino acid sequences, the C-terminal is conventionally placed on the right side. *Aka* C-terminus.

CTP 1. Cytidine triphosphate. 2. Cytidine-5′-triphosphate.

CTSH Chorionic thyroid stimulating hormone.

C-type particles Particles first seen in neoplastic mouse tissue and now known to be oncogenic RNA viruses belonging to the group of leukoviruses. The C-type particles differ from the B-type particles in that they appear to have intracellular precursors (A-type particles) and have a centrally situated genome in the virion. *Aka* C-type virus. *See also* B-type particles.

C-type virus *See* C-type particles; oncornavirus.

Cu Copper.

cubic symmetry Descriptive of a body that has at least four threefold axes of rotational symmetry; includes a perfect cube and point groups that are tetrahedral, octahedral, and icosahedral.

cultivar A variety or a strain of a plant that is produced by humans and that is maintained by cultivation.

cultivation The deliberate propagation of cells or organisms by means of a suitable culture.

culture A population of either microbial cells or tissue cells that grow in or on a nutrient medium.

cumulative feedback inhibition The inhibition of an enzyme that is produced when the enzyme is inhibited separately and independently by two or more end products. When one end product is present, there is a partial inhibition of the enzyme; when two or more end products are present, the inhibition is cumulative.

C_1 unit *See* active one-carbon unit.

cuprammonium rayon Cellulose that has been regenerated from a solution of cuprammonium hydroxide.

cuproprotein A conjugated protein containing copper as a prosthetic group.

curare A plant extract, used as an Indian arrow poison, that contains alkaloids that

10 are cis with respect to the plane of rings A and B.

normal distribution A continuous frequency distribution characterized by a bell-shaped curve and described by the equation $Y = (1/\sigma\sqrt{2\pi})e^{-(x-m)^2/2\sigma^2}$ where m is the mean, σ is the standard deviation, e is the base of natural logarithms, π is a constant equal to 3.1416..., and Y is the height of the ordinate for a given value of X on the abscissa. Different values of m shift the curve along the abscissa without changing its shape. Different values of X change the shape of the curve without changing the position of the center.

normal electrode potential STANDARD ELECTRODE POTENTIAL.

normal enzyme An enzyme, the substrates of which are metabolites normally occurring within the organism, as distinct from a drug-metabolizing enzyme, the substrates of which are compounds foreign to the organism.

normal error curve NORMAL DISTRIBUTION.

normal frequency distribution NORMAL DISTRIBUTION.

normality The concentration of a solution expressed in terms of the number of gram-equivalent weights of solute in one liter of solution. *Sym* N.

normalized substrate concentration REDUCED SUBSTRATE CONCENTRATION.

normalizing The adjustment of data to an arbitrary standard; the normalizing of a spectrum, for example, is done by multiplying the observed absorbance values at all measured wavelengths by a factor that is equal to the ratio of the desired absorbance to the observed absorbance at one particular wavelength.

normal-phase chromatography *See* partition chromatography.

normal saline PHYSIOLOGICAL SALINE.

normal solution A solution that contains one gram-equivalent weight of solute per liter of solution.

normal temperature and pressure STANDARD TEMPERATURE AND PRESSURE.

normal value The amount of a chemical constituent in, or the value of a physical property of, a body fluid or an excretion that is found in 95% of a population of clinically normal and apparently healthy individuals.

norsteroid A steroid-like molecule; a modified steroid in which a ring has been contracted. *See also* nor.

n rthern blotting A variation of the Southern blotting technique in which RNA fragments are separated electrophoretically, transferred to a special paper which binds them covalently, and are then located by hybridization with probes of radioactive RNA or single-stranded DNA. *Aka* northern transfer; northern hybridization. *See also* blotting.

norvaline A straight-chain isomer of valine.

notatin Glucose oxidase; a flavoprotein enzyme that catalyzes the oxidation of glucose to the delta lactone and that can be isolated in a highly active form from the mold *Penicillium notatum*.

nothing dehydrogenase effect An abnormality in the electrophoretic determination of lactate dehydrogenase isozymes in which blank preparations, from which substrate has been omitted, exhibit faint replicas of the normal isozyme pattern. The effect is believed to be due to the presence of alcohol dehydrogenase in the enzyme preparation.

novobiocin An antibiotic, produced by *Streptomyces niveus*, that inhibits DNA replication mainly in gram-positive bacteria.

np Nucleotide pair.

NP antigen A nucleoprotein core antigen of poxviruses.

NPH insulin A neutralized zinc salt of protamine insulin developed by Hagedorn. The salt is insoluble and, when injected into an animal, provides a slowly adsorbed insulin depot so that fewer injections of insulin are required in clinical treatments of diabetes.

n–pi star transition The excitation of an electron from an *n* orbital to a pi star orbital.

NPN Nonprotein nitrogen.

NPU Net protein utilization.

nRNA Nuclear RNA.

NSF National Science Foundation.

NSILA Nonsuppressible insulin-like activity.

N-terminal The end of a peptide or of a polypeptide chain that carries the amino acid that has a free alpha amino group; in representing amino acid sequences, the N-terminal is conventionally placed on the left side. *Aka* N-terminus.

NTP 1. Nucleoside triphosphate. 2. Nucleoside-5′-triphosphate. 3. Normal temperature and pressure.

nu body NUCLEOSOME.

Nuc Nucleoside.

nuclear Of, or pertaining to, the nucleus of either an atom or a cell.

nuclear body NUCLEOID (1).

nuclear column A column of cell nuclei that are immobilized with small pieces of membrane filters and through which a solvent is passed.

nuclear cycle CELL CYCLE.

nuclear division KARYOKINESIS.

nuclear duplication MITOSIS.

nuclear emulsion A photographic emulsion that has been specially sensitized for the detection of alpha or beta particles; it is generally thicker and more concentrated in silver